The Nursing Workforce in Montana
By Amy Watson, Economist

Nurses play a part in nearly all facets of healthcare delivery, from Nursing Assistants who help patients with activities of daily living, to Nurse Practitioners who see their own patients, diagnose and treat acute illness and prescribe medications. The development of a highly-skilled nursing workforce is critical to ensuring a safe and effective health care system in Montana. Currently, there are over 15,000 actively licensed registered nurses (RN), and 2,800 actively licensed practical nurses (LPN) in the state. Understanding the characteristics of these workers is essential to predicting future workforce needs. As Montana's population continues to age and demand more healthcare services, it will be increasingly important to ensure healthcare employers have access to a qualified nursing workforce.
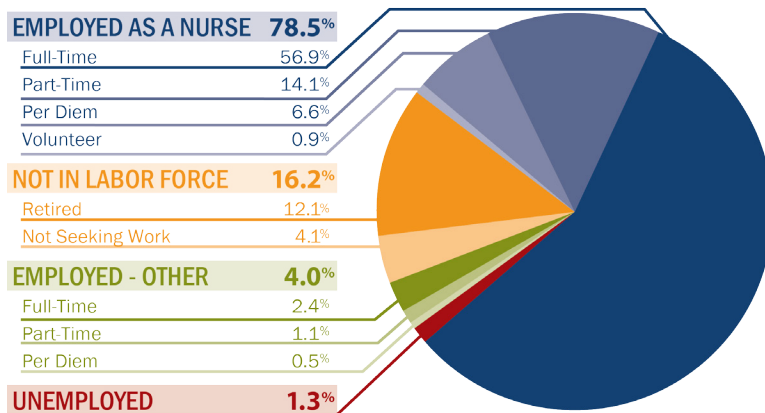
Nurses are Difficult to Find

The labor market for nurses is tighter in Montana than in the U.S., meaning it is more difficult for Montana employers to find the nurses they need to provide healthcare services. Based on a national survey conducted through the National Council of State Boards of Nursing (NCSBN), an estimated 1.3% of all actively licensed registered nurses (RNs) in Montana are currently unemployed, compared to 2.3% of RNs nationally. This unemployment level means that when a hospital advertises an RN position there will be approximately 200 actively licensed RNs in Montana who are unemployed and looking for work. Not all of these RNs will possess the exact skills the hospital wants, or be living close enough to apply for the job. To increase the applicant pool employers will have to attract nurses who aren't currently in the labor force, or who are employed elsewhere. **Figure 1** shows the employment status of actively licensed RNs in the state according to the NCSBN 2015 survey.

Like RNs, the labor market for LPNs in Montana is tighter than the market for LPNs nationally. According to the 2015 NCSBN survey, only 2.9% of LPNs are unemployed in Montana, compared to 5.1% of LPNs nationally. **Figure 2** show the employment status of actively licensed LPNs in the state. For a single LPN job opening, an employer can expect there are about 80 LPNs in Montana who are unemployed and looking for work. The actual pool of applicants for employers will vary based on the advertised compensation, benefits, job requirements, and location.
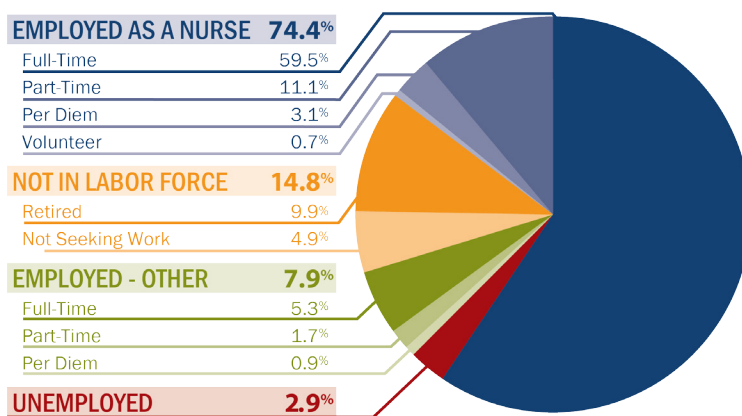
In tight labor markets, employers can increase compensation and benefits to attract more applicants, or commit to doing more on-the-job training if the existing applicant pool does not have all the desired skills. Employers can also make the application process less time-consuming to allow people with family, school, or job commitments to apply.

FIGURE 1
Employment Status of Actively Licensed RNs in Montana

EMPLOYED AS A NURSE	**78.5**%
Full-Time	56.9%
Part-Time	14.1%
Per Diem	6.6%
Volunteer	0.9%
NOT IN LABOR FORCE	**16.2**%
Retired	12.1%
Not Seeking Work	4.1%
EMPLOYED - OTHER	**4.0**%
Full-Time	2.4%
Part-Time	1.1%
Per Diem	0.5%
UNEMPLOYED	**1.3**%

Source: National Council of State Boards of Nursing (NCSBN) 2015 Survey compiled by the Montana Department of Labor & Industry

FIGURE 2
Employment Status of LPNs in Montana

EMPLOYED AS A NURSE	**74.4**%
Full-Time	59.5%
Part-Time	11.1%
Per Diem	3.1%
Volunteer	0.7%
NOT IN LABOR FORCE	**14.8**%
Retired	9.9%
Not Seeking Work	4.9%
EMPLOYED - OTHER	**7.9**%
Full-Time	5.3%
Part-Time	1.7%
Per Diem	0.9%
UNEMPLOYED	**2.9**%

Source: National Council of State Boards of Nursing (NCSBN) 2015 Survey compiled by the Montana Department of Labor & Industry

There are an estimated 4.9% of actively licensed LPNs, and 4.1% of actively licensed RNs who are unemployed and not seeking work. The most common reason these nurses are not looking for work is because of family commitments, such as taking care of children or aging adults. Employers who allow nurses to balance work with family commitments may have better success attracting applicants.

Nursing Job Openings Driven by Replacements

The Montana Department of Labor & Industry projects there will be an average of 445 RN job openings in Montana every year through 2025. The LPN occupation is also estimated to experience large number of openings over the next ten years, adding 107 jobs per year through 2025. Some of these openings are due to an increase in the demand for nurses as Montana's population continues to age and demand more services. However, over half of the projected employment needs in nursing are estimated to occur because of replacements. The Bureau of Labor Statistics (BLS) estimates 23.6% of RNs and 28.5% of LPNs will retire or otherwise leave their job over the next ten years.

ABOUT THE NCSBN 2015 SURVEY

The National Workforce Survey, conducted by the National Council of State Boards of Nursing and the National Forum of State Nursing Workforce Centers, is a national-level survey that is focused on providing an overview of the nursing workforce. The survey is sent out to a random sample of individuals that hold either an active registered nurse (RN) license or an active licensed practical/vocational nurse (LPN/VN) license. In Montana, 1,965 RN licensees were mailed a survey, and 832 responded. Of the 1,516 Montana LPN/VN licensees that were mailed a survey, 594 responded. This analysis focuses on the responses of those Montana licensee respondents.

This analysis weighted the national data by region and age in order to adjust the sample to appropriately represent the Montana nursing population. The national results are also weighted, but the calculations differ in methodology. Caution should be used when directly comparing results from this report and the national results published in the Journal of Nursing Regulation due to these methodology differences.

While Montana's population is older than the national average, the state's nursing workforce isn't much older than nurses nationally. In Montana, the average age of registered nurses is about 49 years old, which is roughly equal to the average age of RNs across the U.S.[1] LPNs are slightly older in Montana than in the U.S. The median age of LPNs in Montana is 51 years old, compared to 48 nationally. The similarities between the age of RNs and LPNs in Montana and the U.S. suggest Montana nurses will retire at similar rates to the national average for nurses. **Figure 3** shows the age distribution of Montana RNs and LPNs compared to the national average as estimated by the NCSBN 2015 survey.

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FIGURE 3

Age Distribution of Actively Licensed LPNs and RNs in Montana Compared to the U.S.
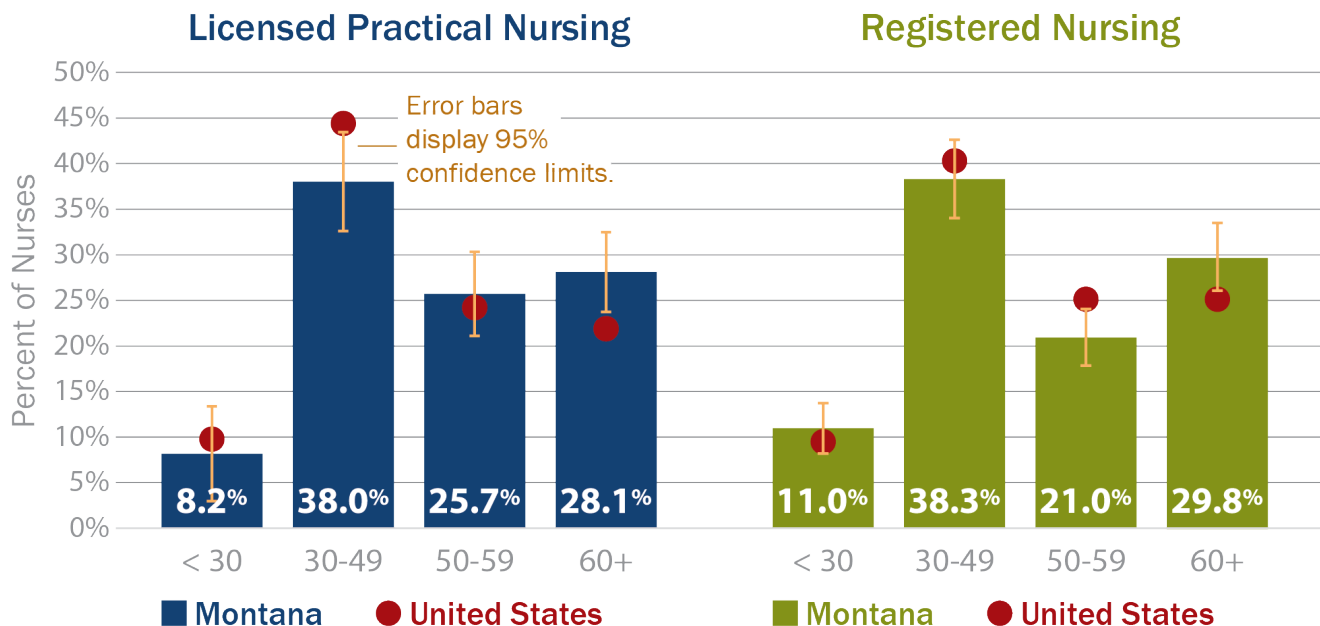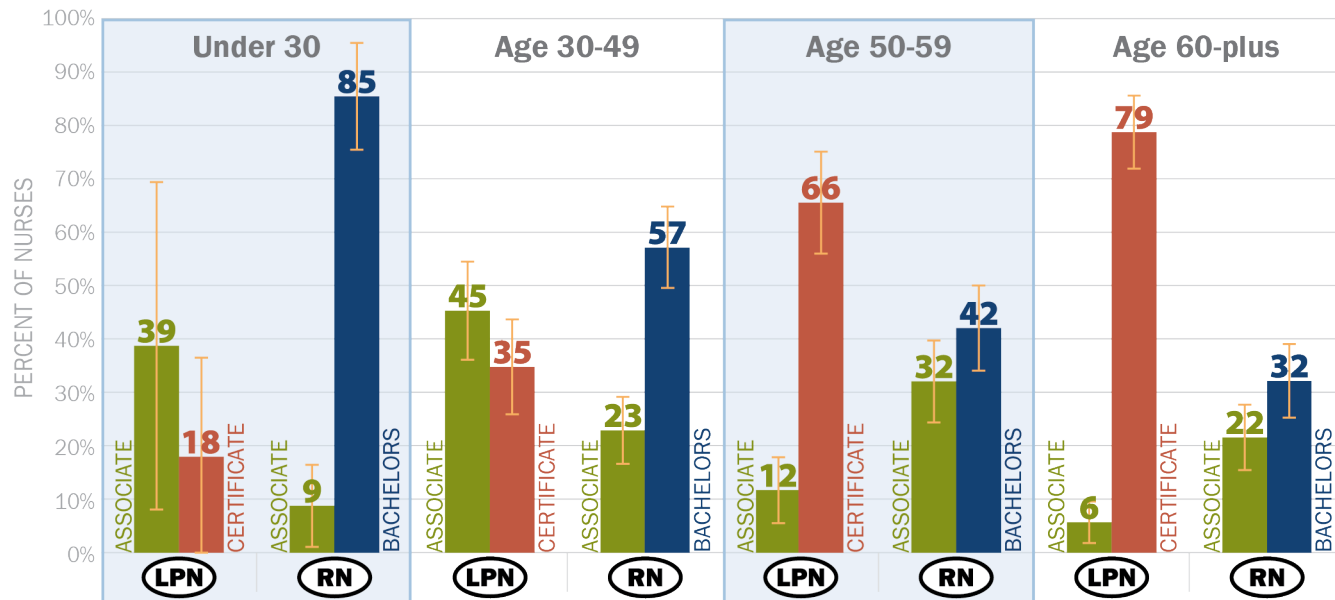

Notes: Error bars display 95% confidence limits of Montana estimates. Montana estimates displayed in white. Confidence limits on national estimates were not available. Source: National Council of State Boards of Nursing (NCSBN) 2015 Survey. Montana estimates compiled by Montana Department of Labor & Industry.

Nurses are Receiving More Formal Education

> **Approximately 53% of registered nurses in Montana entered the profession with a bachelor's degree.**

With over a quarter of the nursing workforce estimated to retire or otherwise leave their jobs in the next ten years, it is important to understand the characteristics of these nurses in order to project future workforce needs. In Montana, an Associate degree is the most common degree held by LPNs and Bachelor's degree is the most common among RNs. Fifty-three percent of RNs in Montana entered the occupation with a Bachelor's degree, which is higher than the national average.[2] However, nurses have not always entered their careers with these high education levels. The NCSBN survey suggests

FIGURE 4
Highest Degree of RNs and LPNs by Age Category

Notes: Error bars display 95% confidence limits. Percentage don't total 100% because some degree types are excluded.
Source: National Council of State Boards of Nursing (NCSBN) 2015 Survey compiled by Montana Department of Labor & Industry.

Bachelor's degree attainment among RNs and Associate degree attainment of LPNs is a more recent trend driven by higher educational attainment of younger nurses. **Figure 4** shows the educational attainment of RNs and LPNs in Montana by age category. Degrees above Bachelors are excluded for simplicity.

Overall, younger workers tend to achieve higher levels of education. Among RNs over 50, a Bachelors degree (BSN) and Associates degree (ASN) are equally as common. However, an estimated 85% of RNs under 30 hold a BSN, compared to only 9% with an ASN. The same trend is true among LPNs. Associates degrees are more common among younger LPNs while certificates are more common among older LPNs. The education level of nurses should continue to rise as retiring nurses are replaced by younger nurses who tend to enter their career with higher education levels.

Most nurses don't achieve higher education after obtaining their license. **Figure 5** displays the academic progression of nurses in Montana by initial degree earned, including both LPNs and RNs. The NCSBN

survey data show that most licensed nurses who obtained a certificate, ASN or BSN as their initial degree still hold that nursing degree as their highest level of education.

Among Registered Nurses, about 18% began their career with an ASN and have since progressed to achieve a BSN. Another 8% obtained a Master's in nursing, or higher. About 59% of licensed RNs who entered their career with an ASN still hold that degree as their highest education level.

There are some regional differences in the education levels of nurses. The NCSBN survey suggests more populated regions that are in closer proximity to

> An estimated 26% of registered nurses in Montana began their RN career with an ASN and have since achieved a BSN degree or higher.

educational institutions have a more educated nursing workforce. The less populated regions of the state are estimated to have more severe worker shortages and increased difficulty in accessing nursing education, making it more likely nurses in those regions have lower education levels.

Academic Progression of Nurses by Initial Degree Type in Montana
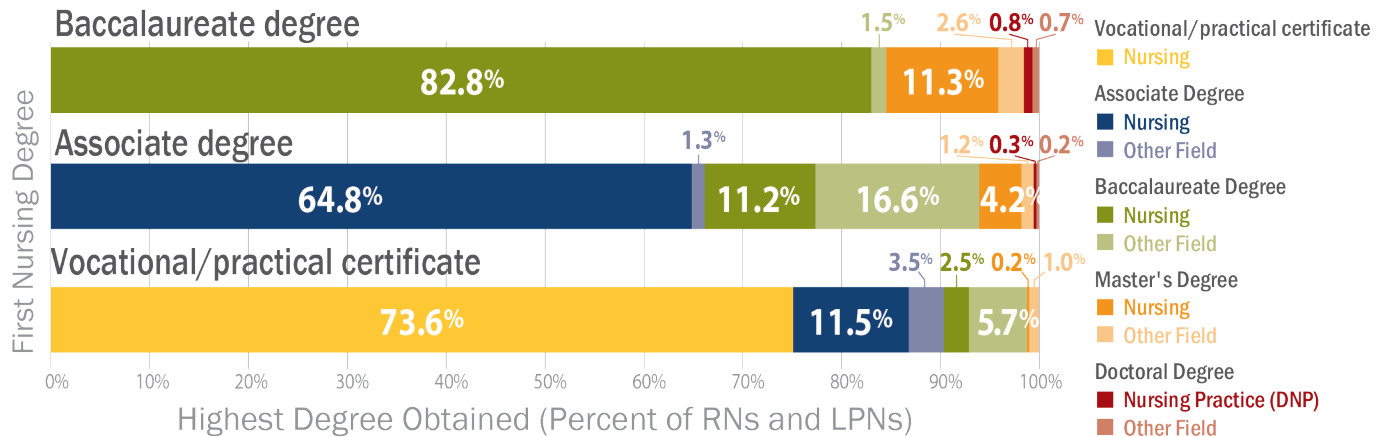
Source: National Council of State Boards of Nursing (NCSBN) 2015 Survey compiled by Montana Department of Labor & Industry.

Wages Respond to License-Type over Education Level

The NCSBN survey suggests that occupation and nursing license type is a better indication of nurses' wages than educational attainment. For a given level of education, there is a relatively large wage difference by license type. ASN RN's make about $51,000 at the median, compared to $36,000 for LPNs. For a given license type, the survey does not suggest there is a big difference in pay between an Associate and Bachelor's degree. At the median, BSN RNs make about $2,000 more per year than ASN RNs, with annual earnings of $53,000. There is a more substantial increase in pay for Master's degree RNs ($68,000), but much of that increase in pay is driven by the wages of Advanced Practice Registered Nurses (APRNs) who make $91,000 at the median. To become an APRN a nurse must hold APRN license, which has a broader scope of practice than an RN license.

Figure 6 shows the occupation and wages of licensed RNs' by educational attainment. The most common occupation among ASN and BSN RNs is a staff nurse. Both BSN and ASN staff nurses reported a median

salary of $50,000. The lack of difference in wages by education could suggest that employers do not perceive major differences in skill levels between BSN and ASN educated nurses. Staff nurses with a master's degree make more, with a median salary of $62,000. Increased education does correlate with increase in wages; however, the difference is minimal between an associate and bachelor's degree, and is greater between a bachelor's and master's degree.

> Increased education correlates with an increase in salary. While the difference is small between an associate degree ($51,000) and a bachelor's degree ($53,000), those with a master's degree report a median salary of $68,000.

Occupation and Wages of Licensed RNs in Montana by Highest Degree

	ASSOCIATE RN	BACHELOR'S RN	MASTER'S RN
Average Wage	$ 51,000	$ 53,000	$ 68,000
Top 3 Occupations, Median Wage, and Percent Employed	#1. Staff Nurse $50,000 (72%)	#1. Staff Nurse $50,000 (74%)	#1. APRN $91,000 (50%)
	#2. Case Manager $53,000 (9%)	#2. Nurse Manager $66,700 (7%)	#2. Nurse Faculty $52,000 (16%)
	#3. Nurse Manager $58,200 (6%)	#3. Case Manager $52,000 (6%)	#3. Staff Nurse $62,000 (12%)

Source: National Council of State Boards of Nursing 2015 Survey, compiled by Montana Department of Labor & Industry.

Capacity to train a qualified nursing workforce is essential to combat a nursing shortage in Montana. The NCSBN survey suggests nursing faculty wages are not competitive enough to attract the qualified faculty needed to train the next generation of nurses. Despite higher education levels, the median wage for nursing faculty is similar to the median wage reported by BSN and ASN RN staff nurses or case managers. Nursing faculty are paid $40,000 less than APRNs at the median, even though both occupations typically require a Master's degree. Master's degree trained nurses have a financial incentive to become APRNs or staff nurses instead of nurse faculty, making recruitment and retention of nursing faculty challenging.

Conclusion

The labor market for nurses in Montana is tight and will continue to tighten as a quarter of the nursing workforce is projected to leave their jobs over the next ten years. In the face of these tight labor markets, employers will need to address some barriers to employment for nurses, like family or school commitments, to recruit them into the labor market. Employers will also have to look at the pool of nurse who are currently employed to fill their open positions.

The education-level of nurses continues to rise in Montana, driven by an increase in educational attainment among younger nurses. However, the NCSBN survey data suggests the value of increased education has not been incorporated into nurses' compensation. Wages are the most responsive to the occupation and license type of nurses. For more information on the status of the nursing workforce in Montana please see the full-length publication available at: lmi.mt.gov/Portals/135/Publications/LMI-Pubs/Labor%20Market%20Publications/NursingReport2016.pdf

Endnotes

[1] The National Council of State Board of Nursing 2015 Survey indicates the average age reported by RNs across the U.S. was 48.8, compared to 48.4 in Montana as of 3/11/16 according to licensure data.

[2] In the United States, 46.5% of RNs hold a bachelor's degree, compared to 36.7% with an associate degree. For a complete list of educational attainment by occupation used by the BLS to determine typical education requirements, please visit: http://www.bls.gov/emp/ep_table_111.htm